Claims:

1. (original) A method for determining the position of an object (1) in space, in which measurement characteristics (4) of the object (1) are recorded with an optical recording device (3) calibrated to a space coordinate system (5), and on the basis of these measurement characteristics (4), the position of the object (1) in the space coordinate system (5) is determined in an image processing device, characterized in that at least two measurement characteristics (4) of the object (1) are detected simultaneously in a recording device (3) and used to determine the position of the object (1).

2. (original) The method as defined by claim 1, characterized in that at least three measurement characteristics (4) from at least one recorded image are evaluated.

3. (currently amended) The method as defined by claim 1 or 2, characterized in that the measurement characteristics (4) are marked points.

4. (currently amended) The method as defined by one of the foregoing claims claim 1, characterized in that a plurality of recording devices (3) are used.

5. (currently amended) The method as defined by claim 1, characterized in that one measurement characteristic (4) is reproduced in a plurality of recording devices (3).

6. (currently amended) The method as defined by one of the foregoing claims claim 1, characterized in that a stationary and/or movable recording device (3) is used.

7. (original) The method as defined by claim 6, characterized in that for a movable recording device (3), after a motion, the position of the recording device

(3) in the space coordinate system (5) is determined.

8. (currently amended) The method as defined by ~~one of the foregoing claims~~ claim 1, characterized in that the recording device (3) is positioned such that between visual rays which strike the recording device (3) and originate at different measurement characteristics (4) and are used to determined the position of the object (1), a large intermediate angle exists in each case.

9. (original) The method as defined by claim 8, characterized in that the intermediate angle is between 10° and approximately 170°.

10. (currently amended) The method as defined by claim 8 ~~or 9~~, characterized in that the recording device (3) is positioned and/or arranged such that as large an intermediate angle as possible exists in each case.

11. (currently amended) The method as defined by ~~one of the foregoing claims~~ claim 1, characterized in that before the method is employed, the coordinates of the measurement characteristics (4) are learned in an object coordinate system (6), in that the object (1) is recorded in a plurality of known positions by the recording device (3).

12. (currently amended) The method as defined by ~~one of the foregoing claims~~ claim 1, characterized in that the selection of measurement characteristics to be detected by a recording device (3), the position of the recording device (3), and/or the focal length of the recording device (3) is determined automatically.